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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/690,839	10/22/2003	Clement Hiel	CTC001-2	5404

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EXAMINER

NGUYEN, CHAU N

ART UNIT PAPER NUMBER

2831

DATE MAILED: 05/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/690,839	Applicant(s) HIEL ET AL.	
	Examiner Chau N. Nguyen	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-90 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 47-62 and 75-90 is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-12, 16-19, 24-35, 37-39, 43-45, 63, 64 and 67-74 is/are rejected.
- 7) ☒ Claim(s) 9, 13-15, 20, 21, 23, 36, 40-42, 46, 65 and 66 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-8, 10-12, 16-19, 22, 24-35, and 37-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moore (4,627,490).

Moore discloses a compression fitting comprising a compressible body (45, Figure 2) having at least one cavity to mate with the core of a first cable and the core of a second cable, a rigid enclosure encapsulating the compressible body to prevent the body from expanding when compress, the enclosure having at least one opening to expose the at least one cavity to enable the body to mate with the core, and at least one compression implement (55) that fits into the at least one opening, wherein the compression implement compresses the compressible body, and

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wherein compressing the compressible body holds the core of the cables with frictional forces (re claims 1, 28). Moore does not specifically disclose the fitting is used to connect a first aluminum conductor composite core reinforced cable and a second aluminum conductor composite core reinforced cable. However, it would have been obvious to one skilled in the art to use the fitting of Moore to connect a first aluminum conductor composite core reinforced cable and a second aluminum conductor composite core reinforced cable since the fitting of Moore comprises structure and material as claimed and since it has been held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

Moore also discloses the compressible body being an elongated cylindrical body having a first end and a second end, wherein a first cavity creates an opening in the first end and axially extends along the length of and within the compressible body almost to a midpoint of the compressible body, and wherein a second cavity creates an opening in the second end and axially extends along the length of and within the compressible body almost to the midpoint of the compressible body (re claims 2, 29), the first cavity mating with the core of the first cable and the second cavity mating with the core of the second cable (re claims 3, 30), the compressible body being an elongated cylindrical body having a first end and a second end, the cavity creates and an opening in the first end and the second end and axially extending the entire length of

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along and within the compressible body (re claims 4, 31), the core of the first cable being inserted into the cavity at the first end and the core of the second cable is inserted into the cavity at the second end (re claims 5, 32), the compressible body is an elastomer (re claims 6, 33), the rigid enclosure is a tube with a first open end and a second open end that accepts the compressible body (re claims 7, 34), the first open end allowing the core of the first cable to mate with the compressible body and the second open end allowing the core of the second cable to mate with the compressible body (re claims 8, 35), the at least one compression implement (55) being a compression nut that threads into the at least one opening of the rigid enclosure, wherein the compression nut compresses the compressible body (col. 4, lines 11-45) (re claims 11, 38), a washer (15) placed between the compression nut and the compressible body in the at least one opening to prevent binding in the compressible body when the compression nut is turned (re claims 12, 39), and a void being created between the conductor and the compressible body (re claim 22). Re claims 10 and 37, it would have been obvious to one skilled in the art to use steel for rigid enclosure of Moore since steel is well-known in the art for being used as enclosure because of its corrosion resistance. Claims 16-19 are method counterparts of claims 1 and 12. Re claims 24-25, it would have been obvious to one skilled in the art to use a suitable compressive force in the fitting of Moore to meet the specific use of the resulting device since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Re claims 26-27, the splice of Moore can maintain a tension in the cable of greater than 33,000 pounds since it comprises structure and material as claimed.

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4. Claims 43-45, 63, 64 and 67-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quesnel et al. in view of Blucher (2005/0061538).

Quesnel et al. discloses a mechanical fitting (Figure 8) to connect a first aluminum conductor composite core reinforced cable and a second aluminum conductor composite core reinforced cable, each cable having a composite core surrounded by a conductor, comprising at least one compressing body having at least one cavity to mate with composite core from the cable, wherein the at least one compressing body is fixed to the core; and a rigid enclosure, wherein the rigid enclosure encapsulates the at least one compressing body; wherein tension on the cable causes the at least one compressing body to compress the core (re claim 43). Quesnel et al. also discloses the at least one compressing body being formed from at least two sections, and wherein the at least two sections close together to compress the composite core (re claim 44), the at least two sections have an indentation on an inner surface along a longitudinal axis, the indentation on the at least two sections form a lumen inside the at least one compressing body when the at least two sections are brought together, and wherein the lumen accepts the composite core (re claim 45). Quesnel et al. also discloses a method to terminate a cable comprising exposing a core of the cable, inserting the core of the cable into a compressing body, compressing the body to hold frictionally the core of the cable, coupling a connector to the body and attaching the connector to a structure to physically terminate the dead end (Figure 7) (re claim 63), inserting the body into a rigid enclosure (re claim 64), slipping a conductor sleeve (48) over the dead end to conduct electricity from the conductor of the cable (re claim 67), a jumper terminal (22) being attached to the conductor sleeve to conduct electricity from the conductor sleeve to the end user (re claim 68), and a void being created between the conductor on the cable

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and the compressible body when the compressible body is compressed (re claim 69). Re claim 70, it would have been obvious to one skilled in the art to fill the void of Quesnel et al. with a substance to prevent moisture penetrating the void since using a substance to fill a void to prevent moisture penetrating the void is known in the art. Re claims 71 and 72, it would have been obvious to one skilled in the art to use a suitable compressive force in the fitting of Quesnel et al. to meet the specific use of the resulting device since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Re claims 73 and 74, the splice of Quesnel et al. can maintain a tension in the cable of greater than 33,000 pounds since it comprises structure and material as claimed.

Quesnel et al. does not disclose the aluminum conductor composite core comprising a plurality of fibers embedded in a resin matrix. Blucher discloses a conductor composite core comprising a plurality of fibers (12) embedded in a resin matrix (14, [0013]). It would have been obvious to one skilled in the art to use the composite core as taught by Blucher for the composite core (36) of Quesnel et al. since the composite core taught by Blucher provides a relatively high strength without expensive cost to manufacture.

Allowable Subject Matter

5. Claims 47-62 and 75-90 are allowed.

Claims 9, 13-15, 20, 21, 23, 36, 40-42, 46, 65, and 66 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. Applicant's arguments with respect to claims 43 and 63 have been considered but are moot in view of the new ground(s) of rejection.

Regarding the 35 USC 103 in view of the Moore (4,627,490) reference, applicant argues that Moore is nonanalogous art. It has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the prior art reference is in the field of applicant's endeavor, electrical conductors or cables. In other words, the instant application is directed to a fitting for connecting a first electrical cable to a second electrical cable. Moore, likewise, discloses a fitting for connecting between electrical cables. Accordingly, the Moore reference is not a nonanalogous art. The fact that Moore does not specifically disclose the fitting being used to connect aluminum conductor composite core reinforced cables together, does not prevent the reference from anticipating the claimed invention. It has been held a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation to do so can be found in both the reference itself and the knowledge generally available to one of ordinary skill in the art. Applicant further argues that the prior art structure is not capable of performing the intended use because the conductors described in Moore are not for the high capacity electrical power transmission in a power grid system. The conductor comprising a core which is comprised of a suitable conducting substance of copper or the like, whereas the core in applicant's invention comprises a plurality of fibers embedded in a resin matrix. This argument is not found persuasive. Moore is relied upon only to teach a fitting for connecting conductors together, therefore Moore does not have to disclose the conductor comprising composite core having a plurality of fibers embedded in a resin matrix. Moreover, the feature of the core comprising a plurality of fibers embedded in a resin matrix has not been recited in claims 1, 16 and 28. Applicant also argues that the use of elastomer in the present applicant and in Moore is different. Again, claims 1, 16 and 28 have not recited any specific material in the claims. The fact that Moore uses elastomer between the core and the steel tube and how the elastomer is being used in Moore, is not relevant to the claimed invention since Moore is relied upon only for teaching of a fitting for connecting cables.

Summary

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N. Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen
Primary Examiner
Art Unit 2831